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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,467	11/20/2003	Hans-Peter Mayer	Q78456	6852

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WASHINGTON, DC 20037

EXAMINER

HEALY, BRIAN

ART UNIT PAPER NUMBER

2883

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/716,467

**Applicant(s)**

MAYER, HANS-PETER

**Examiner**

Brian M. Healy

**Art Unit**

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: Brian Healy

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et. al., U.S. Patent Application Publication No. U.S. 2004/0013359 A1 in view of Duck et. al., U.S. Patent No. 6,438,291.

Lee et. al. teaches (Figs.1-12) a planar waveguide duplex testing circuit (and method of making same) comprising : a plurality of optical waveguides 2060,2030 which form a plate which appears to be encased in matrix material wherein the end facet 2050 has a polished angled end facet with a deposited reflective filter layer on the facet with the optical device being placed in a recess that is adjacent a planar waveguide 1140 and used to couple light signals in conjunction with an index matching material. Lee et. al. '359 does not specifically teach that the plurality of optical waveguides are optical fibers or pieces of optical fibers and that this device can specifically be used as a multiplexer/demultiplexer.

Duck et. al. '291 teaches (Figs.1-6)(Note that Fig.1 is a prior art figure which corresponds to U.S. patent No.5,195,150) that includes an optical device with a planar waveguide 2 located upon substrates 1,23 with a recess 27 into which is placed an optical fiber 29 with an angled facet 31 so that light signals are coupled to the planar

waveguide from the optical fiber. The device of Duck et. al. can also be used as a wavelength multiplexer/demultiplexer device (Note Figs.4 and 5).

Since Lee et. al. and Duck et. al. are from the same field of endeavor, optical waveguide coupling devices, the purpose of coupling light signals from an optical fiber to a planar waveguide and using the device as a wavelength filter/multiplexer, as is taught by Duck et. al., would have been recognized in the pertinent art of Lee et. al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical coupling device of Lee et. al. by substituting the angled optical waveguide for an optical fiber coupled to a planar waveguide, as is taught by Duck et. al., for the purpose of coupling light signals to a planar waveguide and multiplexing/filtering preferred wavelengths.

#### ***Allowable Subject Matter***

Claims 17 and 18 are allowed. None of the references of record teaches or suggests a planar waveguide interrupted by a recess to form two planar waveguide portions with an optical fiber disposed in the recess which optically couples the two planar waveguide portions and at least one thin film layer at the end facet of the optical fiber.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection. Because the new grounds of rejection has not been necessitated by Applicant's amendment, this office action has not been made FINAL.

The following reference is also cited by the Examiner as being pertinent prior art:  
Stegmueller et. al., U.S.P. No.5,195,150 (Figs.1-4).

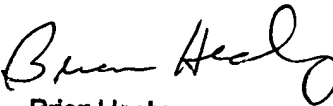
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs. 7AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian M. Healy  
Primary Examiner  
Art Unit 2883

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Brian Healy  
Primary Examiner